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OREGON FLORA NEWSLETTER

Volume 4 Number 1 • Oregon State University • February 1998

Clay Gautier

by Rhoda Love

Clay Gautier is the newest member of the Oregon Atlas Project Leaders group. He has volunteered with Scott Sundberg and others since 1996. "Clay has been instrumental in developing an electronic version of the Oregon Plant Atlas that will be fully interactive and accessible to the public via the Internet," says Scott. Clay, who commutes to OSU from Eugene, brings a special combination of skills to this task: undergraduate and graduate work in ecology and 12 years of experience as a professional software developer.

Clay was born in San Francisco in the mid-fifties and grew up in California and Nevada. He says, "My wife, Gail Baker, and I both went to Redwood High School in Marin County when I was a freshman, but we didn't actually meet until 11 years later in San Diego." In college, Clay majored in biology, receiving his BS from the University of Nevada at Reno. He moved on to graduate school at San Diego State University, earning his MS in 1981 with a thesis on the impact of post-fire seeding with ryegrass on soil erosion and regrowth of native vegetation.

See Gautier, page 4

Clay Gautier, Gail Baker and daughter Nicole

Checklist: Asteraceae

by Scott Sundberg and Kenton L. Chambers

We are pleased to announce the completion of the checklist of Oregon composites (Asteraceae) by the Oregon Vascular Plant Checklist Project. The Asteraceae checklist was written by Kenton Chambers and Scott Sundberg and is currently being reviewed by Checklist project members. It is a portion of the Oregon Vascular Plant Checklist, which is preparatory to a new Flora of Oregon. The Asteraceae Checklist includes accepted names of all Oregon taxa (species, subspecies and varieties) growing outside of cultivation, as well as common names, plant origin (native or introduced) and comments on taxonomic problems and hybridization. Each record is backed up by annotated herbarium specimens or by reference to a published monograph or revision. The accepted names will be cross-referenced to names appearing in ten standard floras and lists of Oregon species.

The Asteraceae, or Compositae, comprises one of the largest, most rapidly evolving, and most successful families of flowering plants. It is also the most diverse family in Oregon, with 574 taxa in 124 genera. Some Oregon Asteraceae are dominant members of their communities, for example sagebrush and rabbitbrush which are familiar components of arid landscapes east of the Cascade Mountains. The Asteraceae family also encompasses some of our worst non-native weeds, including dandelion, Canada thistle, tansy ragwort, and several species of knapweed. A surprising 22 percent of Oregon composites are non-native species.

The nomenclature (naming) of the Asteraceae has been especially dynamic over the past twenty years and this is reflected by a number of new and unfamiliar names for Oregon plants. Also, recent studies in biosystematics and molecular systematics have, in some cases, yielded results that necessitate name changes. Readers who are familiar with the Jepson Manual or the PLANTS database of North American plants will not be surprised by most of these changes. We have spent hundreds of hours examining thousands of specimens and reviewing taxonomic literature to produce the

See Checklist, page 5

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Project News

by Scott Sundberg

In the past four months we have accomplished a great deal. The Atlas project is progressing rapidly, thanks to the efforts of Clay Gautier, ten student workers, and all of you who have sent in species lists. We have produced a mockup of the online Atlas to use for design purposes. A number of technical challenges with the electronic version of the Atlas have recently been addressed. The Atlas database now has over 82,500 records.

The Checklist continues to progress. The Asteraceae treatment is soon to be released and we plan to follow this with treatments of other families. We now list 4,432 plant taxa for Oregon.

The newsletter is now in its fourth year thanks to the hard work of Rhoda Love and Production assistants Alisa Anderson and Camille Tipton. Ken Chambers deserves special recognition for submitting articles on the taxonomy of a number of interesting groups.

The Oregon Flora Newsletter is published three times a year by the Oregon State University Herbarium and the Oregon Flora Project. The Editor is Rhoda Love and the Production Assistant is Alisa Anderson.

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A new name for *Chamaesaracha* in Oregon

by Kenton L. Chambers

The nightshade family Solanaceae is represented in Oregon's flora by approximately 28 taxa, but it seems likely that only five of these are native in the state. The rest are weedy, non-native species—some rare, some common—which have high dispersal capabilities and thrive in the disturbed soils of farms, rangelands, gardens, and roadsides. Various species of ground-cherry (*Physalis*), nightshade (*Solanum*), jimson-weed (*Datura*), and tobacco (*Nicotiana*) that are native elsewhere in North America have established themselves as weeds in Oregon, along with other introduced taxa of European and Asian origin such as henbane (*Hyoscyamus*) and matrimony-vine (*Lycium*).

Given the large number of undesirable weeds in this family, it is understandable that we prize the small group of innocuous native Solanaceae in our flora. One such species is called "dwarf chamaesaracha," an awkward common name which simply repeats the Latin name of the genus. The plants are perennial herbs with white or pinkish dish-shaped corollas about 1.5-2 cm across. The species is common along the east flank of the Cascade Range, in the ponderosa-pine/juniper zone, and extends south into California and Nevada. In nearly every reference manual for Oregon and California the scientific name is given as *Chamaesaracha nana* A. Gray. However, in Vol. 5 of *Intermountain Flora* (1984) the species is named *Leucophysalis nana* (A. Gray) Averett. Curious about this change of names, I looked into the taxonomic literature relating to this plant and its relatives and have concluded that there is indeed good reason to move this species from *Chamaesaracha* into *Leucophysalis*.

Typical chamaesarachas are arid-habitat plants ranging from the southern California deserts east to the southern Great Plains and northern Mexico. Their berry-like fruits, with seeds on a basal placenta, become dryish when ripe. In *Leucophysalis* the berries remain fleshy, and seeds are located all along the central axis of the fruit. Only one other species of *Leucophysalis* occurs in North America—*L. grandiflora* (Hook.) Rydb., of open woodlands in the northeastern United States and adjacent Canada. These distinctions in morphology and habitat were noted in publications by John E. Averett as early as 1970, but the taxonomic changes involved are only now becoming widely accepted. My question to you readers is: should we keep the common name "dwarf chamaesaracha" for *Leucophysalis nana*, or is it time to invent a new English name for the species? Your comments will be welcome.

Some Taxonomic Notes on Oregon Goldenrods, Part II

by Kenton L. Chambers

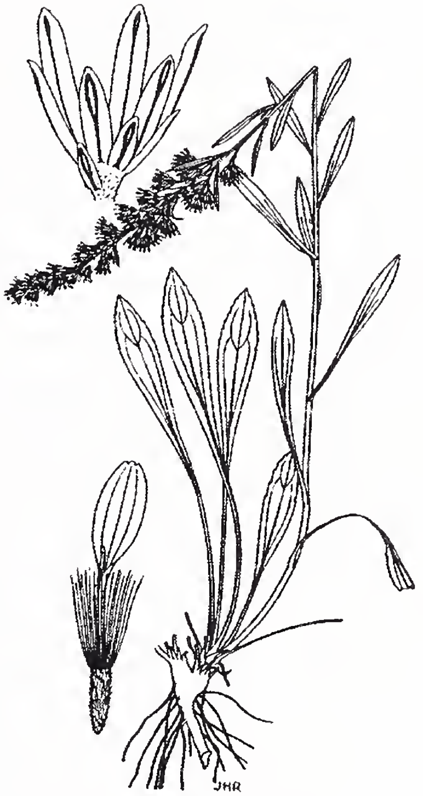
(Editor's note: Part I of Dr. Chambers' article on the genus Solidago *appeared in the October, 1997 issue of OFN.)*

Here I continue my review of taxonomic changes in the genus *Solidago* which arose during my treatment for the Oregon Vascular Plant Checklist.

In a major generic realignment, one Oregon goldenrod species has been moved to the genus *Euthamia*, namely *E. occidentalis* Nutt. (western goldenrod), which in Peck's *Manual* and Hitchcock's *Flora* is called *Solidago occidentalis* (Nutt.) Torr. & A. Gray. This change, based on leaf anatomy and overall growth form, is now widely accepted among experts on the two genera, and I chose to follow their advice for our Checklist. In Oregon this species grows along streams, mainly east of the Cascades, and is distinctive in having tall stems, linear, resinous-dotted leaves, and a much-branched, flat-topped inflorescence.

On bluffs and dunes of the immediate Oregon coast is a low-growing, densely-flowered species, sticky goldenrod. The new taxonomy places it in *Solidago simplex* Kunth, as var. *spathulata* (DC.) Cronquist. Away from the coast this gives way to var. *simplex* (which Hitchcock called *S. spathulata var. neomexicana*); the two varieties intergrade in Tillamook and Clatsop counties. In *The Jepson Manual*, the coastal race is made a separate species, *S. spathulata*, but in Oregon it behaves as a coastal ecotype of *S. simplex*. In its range from Mexico to Alaska and east to Maine, *S. simplex* also contains a dwarf alpine race, which in Oregon extends from Mt. Hood to the Three Sisters; this is now called *S. simplex var. nana* (A. Gray) G.S. Ringius (formerly it was *S. spathulata* var. *nana*).

In the high mountains of eastern Oregon a different goldenrod occurs—*Solidago multiradiata* Aiton (northern goldenrod). Its heads are larger than in *S. simplex*, are not sticky, and form a tight apical cluster. Also distinctive are ciliate hairs on both edges of the basal leaf petioles.



Solidago simplex *var.* simplex. *This taxon was formerly known as* S. spathulata *var.* neomexicana. *It intergrades with the coastal var.* spathulata *in Tillamook and Clatsop Counties. (See also map, page 6.) Illustration by John H. Rumely from Hitchcock et al. 1969,* Vascular Plants of the Northwest, *courtesy of University of Washington Press.*

Solidago missouriensis Nutt., Missouri goldenrod, is common throughout much of eastern Oregon, except alpine regions, and is recognized by its glabrous stems and widely spreading lower inflorescence branches, thus resembling *S. gigantea* and forms of *S. canadensis*. It has elongate, rather narrow leaves which decrease in size up the stem. In Hitchcock's *Flora*, the Oregon specimens are placed in var. *extraria* A. Gray, but in the more recent *Intermountain Flora*, Vol. 5, Cronquist changed his mind and said it was "no longer useful" to recognize this variety. *Solidago missouriensis* at one time occurred in prairies of the Puget Sound area of Washington, as var. *tolmieana* (A. Gray) Cronquist, but I did not find any old collections suggesting it was also in western Oregon in the early days. It would be interesting to know whether the relict prairies near Olympia still contain this goldenrod.

Another species of eastern Oregon, closely related to *Solidago missouriensis*, is *S. spectabilis* (D.C. Eaton) A. Gray, basin goldenrod. The only difference I could see between these two taxa is that *S. spectabilis* has short lateral inflorescence branches and thus a tall but narrow (not pyramidal) inflorescence shape. Its stems and leaves are glabrous, as in *S. missouriensis*, and most specimens were collected from alkaline meadows near relict Pleistocene lake basins. Perhaps this habitat preference allows it to remain genetically separate from Missouri goldenrod.

The final species in our Checklist also finds its northern limit in southern Oregon; this is California goldenrod, *Solidago californica* Nutt. In it, the stems and leaves are covered by a minute, harsh pubescence, and the inflorescence tends not to have widely spreading lower branches. The leaves decrease in size from stem base to apex, as in basin goldenrod. This taxon is related to other hairy-leaved goldenrods of the *Solidago velutina* DC. group, occurring south and east of Oregon, and in *Intermountain Flora*, Cronquist used the latter species name for what I call *S. californica*.

Rare Plants and the Oregon Flora Project

As the Oregon Checklist progresses and work on the Oregon Atlas gathers steam, we are beginning to turn our attention to the Oregon Flora. We plan a Flora which will be available in two versions: a hard copy in traditional book form and an updatable electronic version, to be fully accessible to the public. Both versions of the Flora will give users information about Oregon's rare plants.

Oregon was among the first to identify her rare species. Even before the passage of the 1973 Federal Endangered Species Act, Ken Chambers and Jean Siddall began to list our rare plants. In 1976 they began a series of statewide conferences to gather information on threatened species (see OFN 3(2):10). Today, both the Oregon Natural Heritage Program (housed at The Nature Conservancy in Portland) and the Oregon Department of Agriculture (housed in Salem and at OSU) maintain updated lists of Oregon rare plants. Readers may wonder how the two programs are similar, how they differ, and what categories and criteria of rarity are used.

Oregon Natural Heritage Program (ONHP) bases its extensive lists on rare plant sighting reports and information gathered at rare plant conferences organized by Chambers, Siddall, David Wagner, Jimmy Kagan and others, and continued every other year from 1982 to the present. At these conferences, information on a long list of species is provided by field botanists and land managers from federal and state agencies as well as academic botanists and members of such groups as the Native Plant Society of Oregon (NPSO). Based on information from these conferences, ONHP maintains four lists of rare plants (see box). Approximately 768 plant species are tracked in the ONHP lists. (To view information on ONHP lists, visit web site: www.abi.org/nhp/us/or).

Oregon Natural Heritage Program lists:

(Based on The Nature Conservancy global and state ranks)

List 1 Species endangered or threatened throughout range ~ 165 spp.
List 2 Species threatened, endangered or possibly extinct in Oregon, but more common elsewhere ~ 230 spp.
List 3 Species for which more information is needed ~ 238 spp.
List 4 Species of concern which need to be watched ~135 spp.

The Oregon Department of Agriculture (ODA) Plant Conservation Biology Program began after the 1987 passage of Oregon Senate Bill 533, commonly known as the Oregon Endangered Species Act. This legislation, which was initiated by NPSO, provides statutory protection for vulnerable plants on state land. The ODA rare plant program is currently overseen by Dr. Robert Meinke from offices in Salem and at OSU. Under state law, a plant may be listed as endangered or threatened if it is native and there is evidence of risk to populations or habitats. Generally, plants listed by ODA are threatened throughout their range. ODA staff have conducted field research on some species to determine elements of risk. At present, ODA lists include 30 Endangered and 31 Threatened species, as well as 78 Candidate species under review for possible listing.

In addition to the above, the U.S. Fish and Wildlife Service (USFWS) maintains a list of endangered species used by federal agencies; and the Lane County Chapter of NPSO maintains a list of rare plants that is used in that county.

The Oregon Flora Project will use information from the above lists to give users information about rarity. The printed version of the Flora will provide general indications of rarity. The electronic version however can be specific as to categories of rarity and will be able to provide constantly updated information from ONHP, ODA and USFWS.

Gautier, from front page

Following the completion of his degree, Clay moved to Oregon. Here is how he describes the move: "Research funding was becoming increasingly hard to find, and I was tired of living in a big city, so after finishing my MS I moved to Eugene and found a job as a computer programmer." This was no small feat considering that he had no formal training in computer science and very little experience as a programmer.

Life in Eugene in the early 80s was wonderful according to Clay. Important events took place in his life. He and Gail Baker were married and Gail began to teach biology part-time at Lane Community College. They bought a house, planted a beautiful garden and their daughter, Nicole, was born. Then, in 1988, while he was taking courses in the Department of Computer Sciences at OSU, Clay was contacted by Microsoft. "We didn't want to leave Oregon, but Microsoft made me an offer I couldn't refuse, so we sold our house, packed our things and moved to Redmond, Washington." However, Clay adds, "We knew that some day we would find a way to get back to Eugene and we did." They returned in 1994 when Gail was offered a teaching position at Lane Community College.

Clay first heard Scott Sundberg describe the Oregon Flora Project at a Eugene meeting of the Native Plant Society. He realized that his own background in biology and computer science might make him useful to the project and began to volunteer almost at once. Clay states, "Publishing an interactive web-based atlas is an interesting challenge, and I have really enjoyed researching and working with the new technologies that need to be woven together to make it a reality." He adds, "It has really been great working with Scott and everyone else at OSU."

Checklist, from front page

Asteraceae Checklist. The greatest number of nomenclatural differences are with older floras, such as Peck's *Manual of the Higher Plants of Oregon* (216 name changes in Asteraceae) and the Abrams' *Illustrated Flora of the Pacific States* (206 changes). In Hitchcock and Cronquist's *Flora of the Pacific Northwest*, which was published 25 years ago, 156 names have been changed. The genus name has been changed in about one fourth of these; varieties or subspecies are submerged in one third; and the rest consist of species name changes and changes in taxonomic rank (e.g. varieties changed to subspecies, or elevation of varieties to species).

The Asteraceae checklist is the first of many such lists of Oregon plants to be distributed by the Checklist group. Watch for announcements on our web site (http://www.orst.edu/dept/botany/herbarium) and in this newsletter.

How to Get Your Copy of the Asteraceae Checklist

- For those of you who have participated in or donated to the Oregon Flora Project, the Asteraceae Checklist is available free of charge upon request. Please use the form below.
- Or you may receive a copy in return for a donation of any amount to the Oregon Flora Project. Please use the form below and enclose your check to the OSU Foundation. (The cost of printing and postage is approximately $4.00.)
- Bonus: When we mail your Asteraceae checklist, we will include a list of name changes and their page numbers in the *Flora of the Pacific Northwest* by Hitchcock and Cronquist.

Thanks

Thanks to the Native Plant Society of Oregon, which has renewed its commitment to the Flora Project. We have received generous contributions from the state organization and from the William Cusick and Blue Mountain chapters. Thanks also to the following individuals who have recently contributed to the project: Glen Cole, Jan & Dave Dobak, Florence Ebeling, Nancy Eid, Wayland Ezell & Yvette Villeneuve-Ezell, Mike & Nancy Fahey, Linda Hardison, Aileen Ho (in memory of Leighton Ho), John Koenig, Shane Latimer, Aaron & Sara Liston, Kenneth & Robin Lodewick, Rhoda & Glen Love, Cheryl McCaffrey, Esther & Peter McEvoy, Margaret & Stan Meierhenry, Theodore & Laramie Palmer, Ginny & Jim Post, Don Roberts, Charlene Simpson, Veva Stansell, Kareen Sturgeon, Mildred Thiele, Karl & Elaine Urban, Jim & Nancy Weber, Carolyn Wright and Jo Ann Yeager.

Thanks to the following who have helped by volunteering, sending species lists or specimens, or providing information on Oregon plants: Ed Alverson, Wilbur Bluhm, Mike Fahey, Ron Halvorson, Don Heinze, Daryl Ianni, Jay Lunn, Danna Lytjen, Esther McEvoy, Margaret Meierhenry, Rich Old, Nick Otting, Joyce Owen, Hawk Rondeau, Cliff Schmidt, Gail Smith, Marcia Wineteer and Michael Woodbridge.

Illustrations of *Erythronium oregonum* on the front and back covers by Linda Ann Vorobik.

Map on the back cover was produced with the assistance of A. Jon Kimerling.

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Would you like to make a donation?

Tax-deductable donations can be made to the Oregon Flora Project by sending a check made out to the Oregon State University Foundation to Scott Sundberg. Please note on the check that it is for the Oregon Flora Project. Your donations go primarily toward newsletter expenses and student wages.

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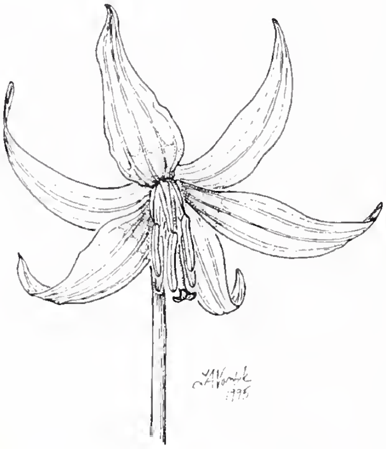

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Did you know?
(Asteraceae Checklist Facts)

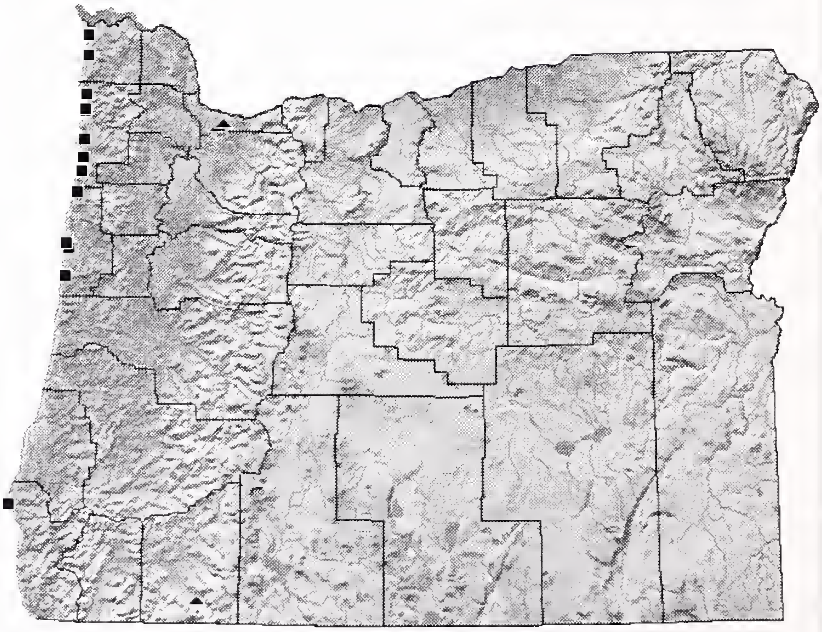
- Asteraceae is the largest family in Oregon with 574 taxa. (Second is Poaceae with 378).

- *Erigeron* is the largest Asteraceae genus in Oregon with 48 taxa; *Aster* is second with 33; *Artemisia* is third with 29.

- Oregon Asteraceae includes 448 native taxa, 125 introduced taxa and one, *Achillea millefolium,* which has both native and introduced populations.

- The genus *Haplopappus* has been split into six genera: *Columbiadoria*, *Ericameria*, *Hazardia*, *Pyrrocoma*, *Stenotus*, and *Tonestus*.

- However, in the Oregon Vascular Plant Checklist the genus *Aster* was not split into *Brachyactis*, *Canadanthus*, *Eucephalus*, *Eurybia*, *Ionactis*, *Oreostemma*, *Sericocarpus*, and *Symphyotrichum,* as proposed by some other authors.



Oregon distributions of *Solidago simplex* var. *simplex* (triangles) and *S. simplex* var. *spathulata* (squares) based on herbarium specimens at OSU. We would appreciate receiving additional specimens of var. *simplex*.

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OREGON FLORA NEWSLETTER

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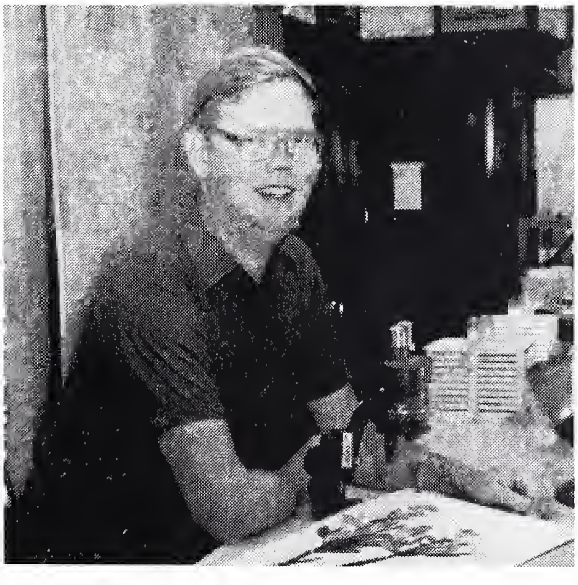
Richard Halse, Curator of the OSU Herbarium

Richard Halse was rescued from a life of mathematics teaching by a pair of superb botany teachers at Northern State College in Aberdeen, South Dakota.

Richard was born and raised in Clear Lake, South Dakota where his family owned a store. He is the second botanist associated with Oregon from Clear Lake. Ethel I. Sanborn, from the same home town, was at the University of Oregon from 1914 to 1917 and at OSU from 1928 to 1948.

Richard entered college expecting to get a degree in mathematics. However, during his second semester he fell under the spell of Mrs. Evelyn Roberts, a botanist with an interest in plant taxonomy, who convinced him to change his major to biology. Later he took his first plant taxonomy class from Dr. Gertude Miller and that, in his words, "... convinced me to stay in the field. It was a great class and a lot of fun." Richard graduated from Northern State with a BS in secondary education in 1970.

See Halse, page 10



Richard Halse hard at work in the taxonomy lab

Amelasorbus: An intergeneric hybrid and a new taxon for the Oregon Checklist

by Rhoda Love

Last spring I worked on treatments of the Rose Family genera *Amelanchier* and *Sorbus* for the Oregon Checklist. Both groups have pome fruits, but the leaves are quite different. While species of *Amelanchier*, the serviceberries, have simple leaves which are often toothed near the apex, our members of *Sorbus*, the mountain ashes, have pinnately compound leaves. As I began the project, Aaron Liston walked into the Herbarium with the latest volume of the *Intermountain Flora* (See OFN 3(3):16,1997).

Reading the introduction to *Amelanchier* in the new volume, I noted the existence of a named intergeneric hybrid between serviceberry and mountain ash from Idaho. The *Intermountain Flora* reported that the taxon had been named ×*Amelasorbus jackii* by Alfred Rehder in 1925, based on a 1918 collection by J. G. Jack from Clearwater County, Idaho. Intrigued, I checked Hitchcock's 1961 *Vascular Plants of the Pacific Northwest* to see if the hybrid was known from Oregon. Hitchcock noted the existence of the hybrid in his introduction to *Sorbus*, but mentioned only the Idaho collection.

I turned next to a 1939 monograph of *Sorbus*, by G. N. Jones in the *Journal of the Arnold Arboretum*, and was excited by his report that pioneer Oregon collector, William Conklin Cusick, had collected the hybrid in the Wallowa Mountains of northeastern Oregon near the mining settlement of Cornucopia, Baker County. Cusick called the entity *Pyrus sambucifolia*, a name used in Howell's 1898 *Flora of Northwest America* for *Sorbus scopulina*. Jones reported that a Cusick sheet had been seen at the University of Minnesota and commented on in 1927 by P. A. Rydberg in the *Journal of the New York Botanical Garden*. Rydberg recognized the specimen as an *Amelanchier*×*Sorbus* hybrid, but was apparently unaware that Rehder had named the hybrid two years earlier. Rydberg's note includes the illustration reproduced here.

Despite Rydberg's note and Jones' monograph, it had apparently been overlooked for years that the hybrid had been collected in Oregon and I wondered if the OSU Herbarium had any specimens. I started in the Peck Herbarium where the last sheet in Peck's *Amelanchier* folder was ×*Amelasorbus*. The specimen was annotated

See Amelasorbus, page 8

Amelasorbus, continued from front page

Amelasorbus jackii Rehder by an unknown person with the initials E. L. N. in 1936. It is Peek's number 4169, collected 2 miles northeast of Cornucopia in 1915 (three years before the Jack type collection from Idaho). Although the Peek specimen is sterile, the foliage is much like the illustration in the Rydberg article, with the general appearance of *Amelanchier* — leaves and leaflets toothed near the tips — but with most of the leaves pinnately compound as in *Sorbus*. Peek did not mention the entity in his *Manual of the Higher Plants of Oregon.*

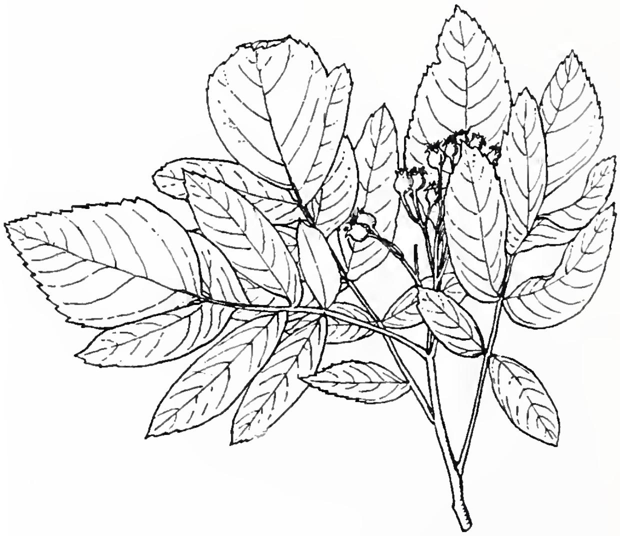
At this point I began to suspect that the OSU Herbarium might also own a Cusick collection of the hybrid, as I was aware that the University of Oregon had purchased approximately 10,000 sheets from Cusick around the year 1913. Indeed we do have a Cusick specimen, which I located filed with *Sorbus*. It was a duplicate of the one seen by Rydberg at Minnesota, Cusick's number 1380. He collected the specimen bearing immature fruits "in mountains west of Cornucopia." The sheet was not specifically dated, however Cusick's label suggests it was collected in the 1880s. Like the specimen seen by Rydberg, it bears the name *Pyrus sambucifolia*. It seems likely that Cusick collected the hybrid at least 25 years before Peek.

Taxonomists agree that ×*Amelasorbus jackii* is most likely a hybrid between *Amelanchier alnifolia* and *Sorbus scopulina*, both of which are found in the Wallowa and Clearwater Mountains. The hybrid could thus be expected to occur wherever the parent species come in contact. Rehder based his 1925 description in part on plants then growing at the Arnold Arboretum, which he reported had been raised from seeds from Jack's original Idaho collection. It is unusual for an intergeneric hybrid to produce fertile seed, but apparently nothing is yet known about the ploidy level or breeding system of the hybrids.

Thus the very interesting intergeneric hybrid, ×*Amelasorbus jackii* (common name amelasorbus), although collected in Oregon at least as early as 1915, and probably in the 1880s, named in 1925, and noted in print in 1927 and 1939 to have been collected in Oregon, will now, after over 100 years, be recognized as part of the Oregon flora.

I wonder if ×*Amelasorbus* can still be found in the Wallowas near Cornucopia?

[Note: After ×*Amelasorbus jackii* Rehder was added to the Oregon Checklist on the basis of this investigation, it was discovered that the taxon is noted to occur in Oregon in the PLANTS database.]



×Amelasorbus jackii, *Rehder is intermediate between its putative parents,* Sorbus sitchensis *and* Amelanchier alnifolia. *Drawing from an article by P.A. Rydberg reprinted with permission from the* Journal of the New York Botanical Garden, (28)333 *copyright 1927. It is based on a William C. Cusick collection from northeastern Oregon, at the University of Minnesota. A duplicate specimen is filed in the OSU Herbarium.*

Illustrations of *Erythronium oregonum* on the front and back covers by Linda Ann Vorobik. Drawing of *Azolla* from *Vascular Plants of the Pacific Northwest* courtesy of University of Washington Press.

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Beware the hybrid gumplant!

by Kenton L. Chambers

I thought of subtitling this article, "How Morton Peck was right even when he was wrong." This would help me combine two themes: first, that much of the difficulty in assigning names to specimens of the genus *Grindelia* (gumplants of family Asteraceae) in western Oregon is due to rampant hybridization between two common species there, and second, that Peck's *Manual of the Higher Plants of Oregon* does not have the correct name for one of these species, namely *Grindelia integrifolia* DC. Both of these themes became apparent to me recently during the preparation of a treatment of *Grindelia* for the Oregon Vascular Plant Checklist.

I have known for many years that the genus exhibits both hybridization and polyploidy, and that in fact nearly every species is able to form hybrids with related ones where there is geographical contact and disturbed habitat available for their interspecific offspring. But that this could be happening in the Willamette Valley did not sink in until I read the comments which Dr. Meredith Lane attached to herbarium specimens at Oregon State University when she prepared the treatment of the genus for *The Jepson Manual.*

Grindelia integrifolia, *Willamette gumweed, ranges from Lane County northward to Puget Sound. Hybrids between this species and* G. nana *var.* nana *can be found along roadsides and in pastures in the Willamette Valley. Illustration by John H. Rumely from Hitchcock et al. 1969,* Vascular Plants of the Pacific Northwest, *courtesy of University of Washington Press.*

Only six species of *Grindelia* are recognized by Dr. Lane for California, although nearly twice that number had been listed in the earlier reference manual *A California Flora,* by Philip Munz and David Keck. Lane reduced some of Munz & Keck's "extra" species to varieties, and others she explicitly called interspecific hybrids. Some of the varieties are themselves intermediates which blend one species into another. Earlier botanists in California had simply named too many species of gumplants; they were misled by the abundance of hybrid populations.

In Oregon we can recognize just five species, one of which (*Grindelia squarrosa* (Pursh) Dunal, curlycup gumweed) may be an adventive weed from farther east in North America, not an original Oregon native. Natural wetlands in the Willamette Valley are home to the very distinctive species, *G. integrifolia* (Willamette gumweed), which ranges from Lane County northward to the Puget Sound region. In the latter area it hybridizes abundantly with the coastal species *G. stricta* DC. (Oregon gumplant), but the Willamette Valley populations are isolated from the coastal ones in Oregon and there is no intergradation possible.

Nonetheless, outside of the valley's marshlands, often in pastures and on disturbed roadsides, are many gumplants which somewhat resemble *G. integrifolia* but clearly do not fit comfortably into that species. It turns out, according to Dr. Lane, that these are hybrids whose other parent is a weedy species, *G. nana* Nutt. *var. nana* (Idaho gumweed), which may have entered the valley from east of the Cascades or from the southwestern parts of the state. *Grindelia nana* differs from *G. integrifolia* in many morphological traits, but the hybrids recombine all their differences and blur one species into the other.

For the Oregon Flora Checklist I have created a hybrid category for the intermediates, using a formula with an "x" between the names of the parents: *Grindelia integrifolia* × *G. nana var. nana.* This will greatly simplify the naming of many specimens and perhaps will satisfy those readers who have been uncomfortable trying to fit the various hybrid forms into either of the parental species.

See Gumplant, page 10

Halse, continued from front page

With the encouragement of Roberts and Miller, Richard entered graduate school in botany at the University of Arizona in Tucson. Working under Dr. Charles Mason, he earned his MS in 1973 with a thesis on the flora of Canyon de Chelly National Monument.

Richard came to Oregon in the 70s to work with Kenton Chambers at OSU. He completed his PhD here in 1980 with a thesis on the systematics of genus *Phacelia* Section *Miltitzia*.

Asked to name the botanists who have most inspired him, Richard named Ken Chambers and LaRea Johnston at OSU, Dr. Charles Mason, at the University of Arizona, and his original mentors in South Dakota.

Richard is currently Curator of the OSU Herbarium as well as an Instructor in biology and botany. In addition he holds an appointment in OSU Extension. In the latter capacity he identifies plants for the Extension Service and for the general public. As Herbarium Curator he is responsible for the daily operation of the Herbarium. He explains, "I take care of the loans, borrowing of specimens and exchanges. A lot of paperwork is involved in these operations."

For the Oregon Vascular Plant Checklist Project, Richard has completed or is currently working on treatments of a large number of groups including the Hydrocharitaceae, Sparganiaceae, Typhaceae, Lythraceae, Zosteraceae, Capparidaceae and parts or all of the Malvaceae, Hydrophyllaceae, Ranunculaceae, Chenopodiaceae, Brassicaceae and others. He is currently working on the Boraginaceae.

Richard was asked what rules govern submission of pressed material to the Herbarium. He explained, "If a person wishes to submit plants, they must have a properly pressed specimen with a sufficient amount of material – a scrap is unacceptable. A label must accompany the specimen and it must be detailed enough so one may relocate the site." Minimal information is location, collector's name and date.

Richard emphasizes that visitors are welcome at the Herbarium. He asks however that they check with him at the time of their visit so that the rules governing the examination of specimens can be explained. The herbarium is located on the ground floor of Cordley Hall (Room 1045) on the OSU campus, and is generally open from 9:00 am to 5:00 pm Monday through Friday. Richard's phone number is (541) 737-5297.

Gumplant, continued from page 9

Serendipity means discovering the truth through accident. In his *Manual of the Higher Plants of Oregon*, Morton Peck accidently confused two different gumplants bearing the name "*integrifolia.*" He should have used the name *G. integrifolia* (proposed by the botanist DeCandolle) as a *specific* epithet for the Willamette gumweed; instead he used a varietal name *G. nana* var. *integrifolia* (proposed by the botanist Nuttall for a completely different plant!). Yet, in using the name of a variety of *G. nana*—by mistake—for plants of the Willamette Valley, Dr. Peck was actually expressing a truth, namely that many gumplants in the valley are hybrids between the wetlands species *G. integrifolia* and the eastern drylands species *G. nana*. Although he was technically incorrect in his choice of a name, Morton Peck understood quite well the mixed-up nature of our western Oregon gumweeds.

Wanted: floating ferns and duckweeds

Azolla

In Oregon we have two species of floating ferns, or water ferns: *Azolla filiculoides* Lam. and *A. mexicana* Presl. These are difficult to identify and previous identifications, which were based on characters that are not reliable, are suspect. In the *Flora of North America Volume 2*, Thomas Lumpkin uses characters of the spores and leaf hairs to distinguish the two species. The leaf hairs are best observed in fresh material. The floating ferns are small (usually one to two centimeters in diameter) branching plants that float on the surface of ponds. They are typically green but often turn red, when they are most visible from a distance.

We still have very few records of duckweeds (Family Lemnaceae) from Oregon. If you see floating ferns or duckweeds (they often grow together) please send material to me in a moist paper towel inside a sealed plastic bag. A mixed collection is perfectly acceptable. I will provide an identification and you will be helping us unravel some of the mysteries of our smallest vascular plants! - *Scott Sundberg*

Project news:
Asteraceae Checklist now available

by Scott Sundberg

The *Oregon Vascular Plant Checklist: Asteraceae* by Kenton L. Chambers and Scott Sundberg is now available. This 54-page booklet lists all known native and naturalized species, subspecies and varieties of Oregon's largest family.

The full *Checklist* database now lists 4,438 taxa for Oregon and 2,308 synonyms. Draft treatments of a number of small families have been submitted recently and we are selecting a group of families to publish next.

We continue to gather data for the Atlas project, but data entry is slow during the summer when most student workers are away. In the Fall, a new Graduate Research Assistant and a returning undergraduate student will help manage the database.

To Get Your Copy of the Asteraceae Checklist

- For those of you who have participated in or donated to the Oregon Flora Project, the Asteraceae Checklist is available free of charge upon request. Please use the form below if not on our mailing list.
- Or you may receive a copy in return for a donation of any amount to the Oregon Flora Project. Please enclose your check to the OSU Foundation. (The cost of printing, postage and handling is approximately $4.00.)
- Bonus: When we mail your Asteraceae checklist, we will include a list of name changes and their page numbers in the *Flora of the Pacific Northwest* by Hitchcock and Cronquist.

Thanks

Thanks to the Native Plant Society of Oregon, which has renewed its commitment to the Flora Project. We have received generous contributions from the Corvallis, Portland, Willamette Valley and William Cusick chapters. Thanks also to the Leach Botanical Garden.

Thanks to the following individuals who have recently contributed to the project: Gail A. Baker, Sara Barnum, Dick Brainerd, Mary R. Carlson, Ken and Henny Chambers, Al Chase, Sarah Spear Cooke, Theresa Daley, Jim Duncan, Don & Priscilla Eastman, Nancy Eid, Shelley Evans, Joan & Ollie Fosback, Robert Frenkel, Roy Gerig, Barbara & Glen Halliday, Karen Hinman, Noel and Patricia Holmgren, Jon Shane Howe, Larry Hufford, LaRea Johnston, Marilynn Karbonski, David Keil, John Koenig, Bob Krumm, Ken & Robin Lodewick, Rhoda and Glen Love, Judith Manning, Daniel Mathews, Bruce Newhouse, Bonnie Brunkow Olson, Robert Ornduff, Richard Prusz, John W. Reynolds, Wes L. Reynolds, Bob Ross, Elizabeth Russell, Reid Schuller, Charlene J. Simpson, Kareen B. Sturgeon, Mildred Thiele, Jonathan Titus, Phil Warner, Barbara Wilson, Susan and Masatoshi Yamanaka, Jo Ann Yeager, Berta A. Youtie.

Thanks to the following people who have helped by volunteering, sending species lists or specimens, or providing information on Oregon plants: Mark Bierner, Wilbur Bluhm, Darren Borgias, Mariana Bornholdt. Ginger Craig, Anne Forrestal, Valerie Geertson, Venita Gralow, Don Heinze, Russ Jolley, Lisa Karst, John Kartesz, David Keil, John Koenig, Jay Lunn, Esther McEvoy, Dave Predeek, Loren Russell, Michael Woodbridge, Susan and Masatoshi Yamanaka.

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Would you like to make a donation?

Tax-deductable donations can be made to the Oregon Flora Project by sending a check made out to the Oregon State University Foundation to Scott Sundberg at the address on this page. Please note on the check that it is for the Oregon Flora Project. Your donations go primarily toward newsletter expenses and student wages.

☐ Please send the Asteraceae Checklist (include check if appropriate).

☐ Please put me on the Oregon Flora Newsletter mailing list.

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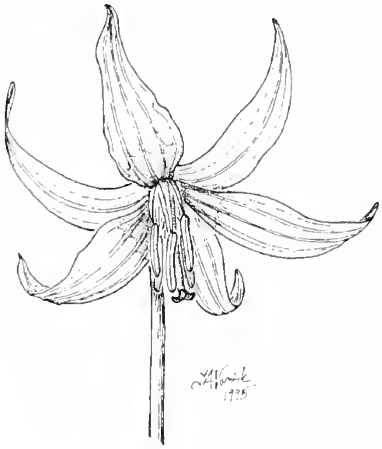

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Did you know?
(Submitted by the Carex Working Group)

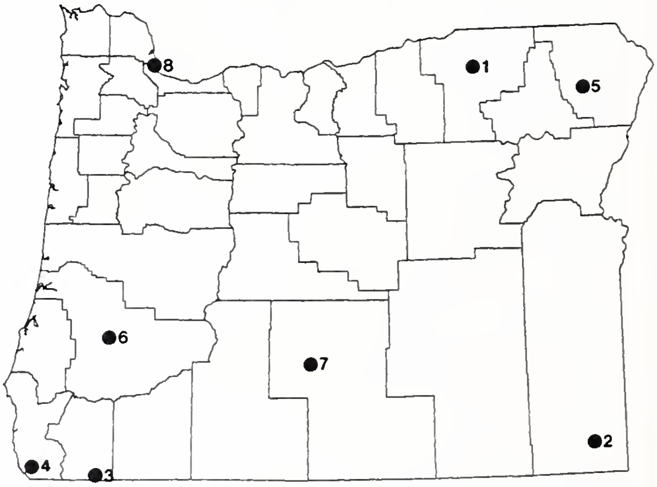
- There are 126 *Carex* taxa in Oregon; 16 of these taxa are introduced.

- The oldest record in the Carex Working Group database is *Carex laeviculmus* collected on Sauvie Island in 1880 by Thomas Jefferson Howell.

- In the database, Lane County has the greatest recorded *Carex* diversity with 69 taxa; Gilliam and Sherman counties have the least with four taxa each.

- Barbara Wilson has made approximately 700 *Carex* collections; L.F. Henderson collected 386, Peter Zika collected 350 and Georgia Mason 207.

- There is only a single collection for each of the following: *Carex diandra, C. pluriflora, C. saxatilis*, and *C. parryana*.



Only one collection at OSU

Please let us know if you have seen any of these:

1. *Artemisia abrotanum*
2. *Artemisia papposa*
3. *Aster breweri*
4. *Baccharis douglasii*
5. *Filago arvensis*
6. *Filago vulgaris*
7. *Helianthus petiolaris*
8. *Lapsanastrum apogonoides*

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OREGON FLORA NEWSLETTER

Volume 4 Number 3 • Oregon State University • October 1998

Dr. Henrietta Laing Chambers, botanist, educator, researcher and Vascular Plant Checklist contributor

by Rhoda Love

Henrietta Laing Chambers (called "Henny") has broad botanical interests. For example, she contributed the article on the family Fagaceae in this issue of OFN as well as an earlier article on the Caprifoliaceae (OFN 3(1) 1997, and she was co-author with her husband Ken Chambers of an article on the genus *Stachys* in that same issue.

Henny says her interest in botany began at an early age in New Rochelle, New York when she went on springtime jaunts with friends and a favorite aunt to look for wildflowers in the woods near her home.

Henny decided very early on a career in biology while at Maryville College in Tennessee. On the advice of friends, she took a beginning botany class as a sophomore and served as the lab assistant for the same course during the next two years. She received her BA from Maryville in 1955 and moved on to the University of North Carolina in Chapel Hill to work on her Master's degree. Her thesis was a flora of Harnett County, NC, an area of considerable plant diversity. She says: "At the time I was at UNC, four of the Botany Department faculty were collaborating on a flora of the Carolinas, and the county floras done by us graduate students contributed to this larger work."

See Chambers, page 17

Photo: Kenton Chambers

Henrietta Chambers in the Herbarium

Introducing Friends of the Oregon Flora Project

by Keli Kuykendall

Friends of the Oregon Flora Project, a new fund-raising group, is being sponsored by The Native Plant Society of Oregon (NPSO). Over the next 10 years, Friends will work to raise the projected 2 million dollars needed to complete the *Flora of Oregon*, a manual for the identification of Oregon plants. Our immediate goal is to acquire funds to support key staff positions. Oregon State University supports the Flora project by providing work space, computers, and crucial infrastructure. The greatest remaining expense to the Oregon Flora Project is the cost of labor.

The Oregon Flora Project is now beginning its fifth year as a volunteer organization of dedicated individuals working to ensure the successful completion of a new *Flora of Oregon*. During the past four years, the project has made remarkable progress determining which plants grow where in Oregon, developing a prototype of an electronic plant Atlas, publishing the *Oregon Flora Newsletter*, compiling herbarium specimen label data and publishing the *Oregon Vascular Plant Checklist: Asteraceae*. Many loyal contributors to the Oregon Flora Project have made this progress possible.

To facilitate fund raising, OSU's Director of Development advised us to form a "Friends" group. We turned to those who have stood behind the Oregon Flora Project from the beginning: the Native Plant Society of Oregon, whose board voted to sponsor the Friends group, and allow me, Keli Kuykendall, to chair this new NPSO Committee. With NPSO sponsorship, the Friends group will be better able to implement an active fund raising campaign on behalf of the Flora Project.

So now there are two avenues available to make donations to the Flora project. You may continue to make donations directly to the OSU Foundation, or donations may be routed through NPSO via the new PO Box address. All the funding goes into the same Oregon Flora Project account, with no hidden fees and no additional administrative costs. If you have been making

See Friends, page 14

Friends, continued from front page

donations through the OSU Foundation, you may continue to do so. The Friends will focus on recruiting new donors, both individual and corporate.

This fall, I am setting up a Friends Committee to help with grant writing, bookkeeping and general fund raising. If you have experience or enthusiasm, contact me, Keli Kuykendall, at (541)758-8409, kuykendk@peak.org or our new address: Friends of the Oregon Flora Project, PO Box 402, Corvallis OR 97339.

You can read more about Friends of the Oregon Flora Project in the enclosed brochure. I am grateful to Esther McEvoy and Rhoda Love who contributed their time, money and artistic talents to the brochure. The brochure also will tell you how you may request a beautiful *Erythronium oregonum* print by Bonnie Hall when you become a member. Use the brochure to join the Friends group today, and feel free to make copies for others who may be interested.

Illustrations of *Erythronium oregonum* on the front and back covers by Linda Ann Vorobik.

The Oregon Flora Newsletter is published three times a year by the Oregon State University Herbarium and the Oregon Flora Project. The Editor is Rhoda Love and the Production Assistant is Alisa Anderson.

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The Family Fagaceae in Oregon Part I

by Henrietta L. Chambers

The new treatment of Fagaceae in volume 3 of the *Flora of North America* (1997) by Kevin C. Nixon, Paul S. Manos, Richard J. Jensen and Cornelius H. Muller has excellent distribution maps, leaf and fruit drawings and keys. My treatment of the Fagaceae for the *Oregon Vascular Plant Checklist* is based on theirs. Oregon has two species of *Chrysolepis* (formerly *Castanopsis*), one species of *Lithocarpus* (with two varieties), and six species of *Quercus*, including one hybrid. The cupule or involucre is the most important diagnostic feature of the Fagaceae. The cupule is the cap of the acorn in *Lithocarpus* and *Quercus* and the spiny bur that surrounds the fruits in *Chrysolepis*. In Oregon, the southwestern region of our state contains the greatest diversity of taxa in this family. All three genera have evolved shrubby or small tree forms in these hotter, drier habitats.

Field botanists, naturalists and foresters are always unhappy with a change in a well-known genus name, but the switch from *Castanopsis* to *Chrysolepis* occurred in a 1948 monographic study. H. Hjelmquist, a Swedish taxonomist, chose to separate the Western United States chinquapin taxa (two temperate species) from the true *Castanopsis* of Asia (120 tropical and subtropical species) on the basis of cupule structure. Hjelmquist chose the name *Chrysolepis* which means “gold scale” referring to yellow glands on various plant structures.

The chinquapins are distinct from other Oregon Fagaceae in their fruit structure, with a densely spiny involucre that completely encloses one to several angular or round nuts. The lower surface of the leaves has a dense layer of rusty-golden, glandular pubescence which is visible from some distance. *Chrysolepis chrysophylla* var. *chrysophylla* (golden chinquapin) grows from sea level to 2,000 meters along the coast from Washington to northern California, extending inland to the Cascades and Sierra Nevada. These trees, up to 45 meters in height, typically have flat leaves. *Chrysolepis chrysophylla* var. *minor* comprises shrubs which range from 2-5 meters tall; their leaves are strongly folded along the midvein. The shrubs grow on rocky, open slopes, in conifer forests and chaparral communities from 300-1800 m in California and southern Oregon.

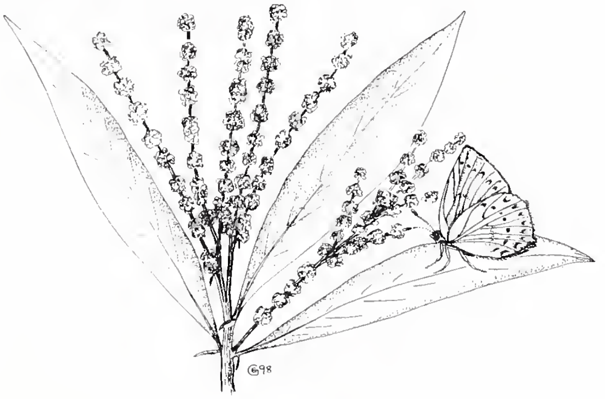
Chrysolepis sempervirens (bush chinquapin) is a low rhizomatous shrub (up to 2.5 m tall) which occurs mostly at higher elevations in California and southern Oregon. Its low growth form and blunt-tipped leaves separate it from *C. chrysolepis* var. *minor*.

See Fagaceae, page 15

Fagaceae, from page 14

Lithocarpus densiflorus (tanoak) has a single species in western North America while the Indomalaysian region has approximately 300 species. The genus is present in the fossil record of western North America. The cupule or cap, which covers the basal portion of the single large nut, has strongly reflexed scales that are hooked at the tip. There are two varieties in California and southern Oregon. *Lithocarpus densiflorus* var. *densiflorus* is a tree ranging from 20-45 meters tall. It occurs in mixed evergreen and Coast redwood forests from 0-1500 m. The leathery evergreen leaves are entire or slightly serrate and are up to 12 cm long. They are convex toward the tree axis (adaxially), a feature that is often difficult to see on herbarium specimens. *Lithocarpus densiflorus* var. *echinoides* is a shrub up to 3 m but generally less than 2 m. The leaves are much smaller (up to 6 cm) than the typical variety, and the blades are flat. These shrubs grow in the Siskiyou region of southern Oregon and in the Sierra Nevada south to Mariposa County, California.

(Editor's note: Part II of Henrietta Chambers' taxonomic notes on Oregon Fagaceae will appear in the next Oregon Flora Newsletter.*)*



Chrysolepis chrysophylla, *golden chinquapin, with hairstreak butterfly, an insect whose larvae feed on this species. Drawing: Esther Gruber McEvoy.*

Asteraceae Checklist still available

- For those of you who have participated in or donated to the Oregon Flora Project, the Asteraceae Checklist is available free of charge upon request. Please use the form on page 17 if not on our mailing list.
- Or you may receive a copy in return for a donation of any amount to the Oregon Flora Project. Please enclose your check to the OSU Foundation. (The cost of printing, postage and handling is approximately $4.00.)
- Bonus: When we mail your Asteraceae checklist, we will include a list of name changes and their page numbers in the *Flora of the Pacific Northwest* by Hitchcock and Cronquist.

Cherchez les hommes (In *Antennaria,* boys are a minority)

by Kenton L. Chambers

Scan a murder mystery novel and you may find the wily French detective (Inspector Maigrait, no doubt) uttering that immortal phrase, *cherchez la femme* (look for the woman) to solve the crime. Putting a botanical spin on the mystery, let us consider the genus *Antennaria* (pussytoes, family Asteraceae), which I recently reviewed for the *Oregon Vascular Plant Checklist.* Containing 19 taxa in Oregon, this is the sixth largest genus of Asteraceae in the state, and in my experience it presents taxonomic ambiguities at least equal to any of the five larger ones (*Erigeron, Aster, Artemisia, Senecio,* and *Cirsium*). In pussytoes it is common to find populations composed entirely of pistillate ("female") plants; no staminate ("male") ones, and hence no pollen grains, are available for the plants' reproduction. There is a well known explanation for this—namely, apomixis (seed formation without fertilization, a form of cloning). However, this unusual process is intertwined with hybridization and polyploidy in *Antennaria*, creating genetically diverse populations which are extremely hard to classify.

Apomixis is well established in several other Asteraceae genera in Oregon, notably in *Crepis, Erigeron, Arnica,* and *Taraxacum*. Only in *Antennaria*, however, is the process associated with the dioecious floral condition, i.e., with separate pistillate and staminate individuals. The presence or absence of staminate plants in a population is therefore a relatively good indicator of the mode of reproduction. If males are present, the population is making seeds by sexual outcrossing; if there are no male plants, then the seeds contain embryos that are asexual copies (clones) of their pistillate parent. As explained below, it may be important to know the reproductive mode of particular pussytoes populations, if one is trying to assign species names to them. The taxonomy of the genus, in other words, is strongly dependent on knowledge of its breeding systems.

The taxonomic arrangement of *Antennaria* which we adopted for the Checklist is mainly based on detailed studies by R.J. Bayer and G.L. Stebbins (1987 and 1993). It turns out that some pussytoe species are morphologically distinct, fully sexual, and offer no taxonomic problems. Examples are *Antennaria geyeri* (pinewoods pussytoes), a gray, leafy-stemmed and bushy, small-headed plant of the ponderosa-pine woods east of the Cascade Range; *A. suffrutescens* (shrubby pussytoes), a low-growing subshrub of the Siskiyou Mountains, with small, strongly bicolored leaves (green above, gray-woolly below); *A. racemosa* (slender pussytoes), a taller

See Antennaria, page 16

Antennaria, continued from page 15

plant of montane coniferous forests whose leaves are broad-bladed, three-nerved, glabrous above and woolly below; and *A. dimorpha* (low pussytoes), a cushion-plant with short, single-headed flowering stems, characteristic of sandy or rocky soils in dry environments east of the Cascades. In all these species you can expect to find male and female plants growing together in approximately equal numbers.

There are several other Oregon *Antennaria* species, however, that are very difficult to tell apart. Either there is a complete blend of characteristics between taxa, or else the "key" differences are so minor that only a single subtle trait may distinguish one species from another. Included here is a group of widespread montane and Great Basin taxa with a mat-forming, stoloniferous habit: *A. rosea* (rosy pussytoes, sometimes included in *A. microphylla*), *A. media* (alpine pussytoes, =*A. alpina* var. *media*), *A. umbrinella* (umber pussytoes), *A. corymbosa* (flattop pussytoes), and *A. aromatica* (aromatic pussytoes). According to Bayer and Stebbins, the intergradation among these species results from a complex history of past hybridization. Hybrid plants, often having chromosome numbers that are four, six, or eight times the basic number, usually exist as female-dominated populations. The plants can make seeds with or without pollination, so males are not needed and they become rare or absent.

In studying numerous herbarium specimens of the five above-mentioned taxa, I had to make arbitrary judgements about what species names to use. For example, Bayer and Stebbins showed that *Antennaria rosea* is an asexual, female-only, hybrid-derived taxon; its ancestors include sexual forms of *A. microphylla, A. corymbosa*, *A. umbrinella*, and *A. aromatica*, among others. Therefore, *A. rosea* consists of numerous different hybrids which combine the traits of two or more ancestral species! Additionally, it is our only species of this complex to have a large proportion of plants with a rosy-red tint on their involucral bracts. Related species range from pure white bracts (as in *A. microphylla*) to dusky brown or greenish ones (as in *A. umbrinella* and *A. media*). This allowed me to assign the name *A. rosea* to all collections having roseate involucral bracts—a single key character defines the species in this case.

In no collections having rosy-colored bracts did I find any male plants. However, I did find other collections (lacking male plants) whose involucral bracts were pure white (like *A. microphylla*) or were white with a dark-brown spot on the back (like *A. corymbosa*). Did the absence of male plants on the herbarium sheets mean that these populations were female-only and apomictic? If they were, their classification should be as *A. rosea*, according to Bayer and Stebbins. I finally decided to call the brown-spotted ones *A. corymbosa* and the pure white ones (which often formed mixed collections with rosy-pink ones) *A. rosea*. This was an arbitrary decision, based on a lack of definitive evidence for apomixis.

Within the above species-complex, plants whose involucral bracts were dusky-brown or blackish could belong to any one of three species. I named them *A. umbrinella* if the bracts were blunt-tipped. Populations having acute-tipped brownish or blackish bracts were assigned to the widespread alpine species *A. media* if they lacked aromatic glandular hairs on their stems, and to the localized Wallowa Mountains species *A. aromatica* if they possessed such hairs. All three of these species must be largely apomictic and female-only in Oregon, as male plants are seldom collected. However, according to Bayer and Stebbins, the name *A. aromatica* should only apply to sexually reproducing populations. The species has been so rarely collected in Oregon that we do not yet know its reproductive status here.

To return to the title of this paper, in *Antennaria* it is important that we *cherchez les hommes*—look for the men! The puzzle of what species names to attach to plants of the *A. rosea* complex is much more easily solved if we know whether male plants were growing with the females. Nearly all our herbarium collections have only pistillate plants; rarely do collectors state on their labels whether staminate plants were present or absent. Let me recommend to all future collectors who prepare samples of *Antennaria:* please, "look for the men." Search for staminate plants and include them in your collection, or state on your specimen label that no males were observed. Perhaps this will help remove some of the mystery from the taxonomy of Oregon pussytoes.

Antennaria racemosa, *a sexual,outcrossing species. Illustration: J.H. Rumely, from Hitchcock et al. 1969. Courtesy U. of Washington Press.*

References: Bayer, R.J., and G.L. Stebbins. 1987. *Systematic Botany* 12:305-319; and 1993. *Canadian Journal of Botany* 71:1589-1604.

Chambers, from front page

Henny went to Yale University for her PhD. Her husband Ken was an instructor in botany at Yale at that time and he has written in these pages that one of the best experiences of his years at Yale was meeting Henny (OFN 2(4) 1996). For her PhD dissertation, Henny combined classical taxonomy with cytology, a hot field at that time. Her subject was the mint family (Lamiaceae) genus *Pycnanthemum*. Henny counted chromosomes for all entities in the genus and published her thesis findings in 1961 with a follow-up paper in 1971, reporting on artificial and natural hybrids.

Henny and Ken moved to Corvallis in 1960 where she began a half-time position at OSU in plant pathology. This allowed her to spend time with her two children born in 1960 and 61 as well as continue her professional work. When she started teaching at Linn-Benton Community College in 1972, she continued her hybridization studies and also collaborated with her LBCC colleague, Robert Ross on the well-loved book, *Wildflowers of the Western Cascades* (Timber Press, 1988). At this time she also became the curator of the *Mentha* (the mint genus) collection at the National Clonal Germplasm Repository in Corvallis.

Henny began volunteering for the Oregon Flora Project in 1995. Because of her earlier work in the family, she began by working on the Lamiaceae for the Checklist. Since then she has contributed treatments of the Verbenaceae, Caprifoliaceae, Cornaceae, Fagaceae, Plumbaginaceae and most of the Primulaceae. Last month she began work on the large, diverse, and very interesting family Ericaceae. These are the rhododendrons, huckleberries, pyrolas, and their relatives. She states with evident enthusiasm: "I am really glad that I can be involved in this project."

Henny and husband Ken, both now retired from teaching, do a good deal of traveling. "As you might guess," she says, "we center our trips around our research and general collecting interests. We love the back roads of eastern and southern Oregon and parts of California. And we especially love the wonderful Oregon vistas."

Thanks

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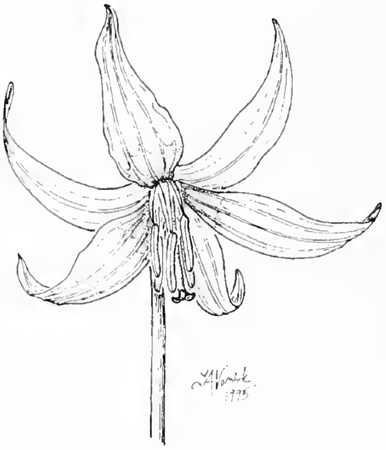

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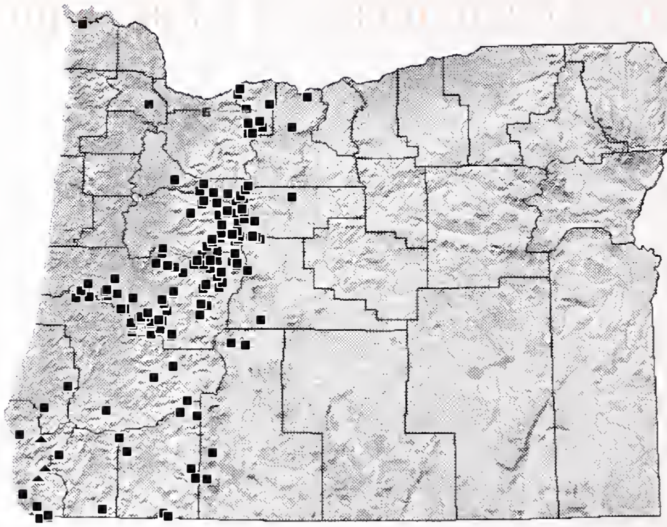
Did you know?

Scott Sundberg and Rhoda Love traveled (separately) with their spouses to the British Isles this summer and returned with these observations:

- Bracken fern (*Pteridium aquilinum*, a worldwide species), although native to the Scots Highlands, has become an invasive weed there due to past land use practices which included deforestation and management for grouse.

- Oregon natives Douglas fir (*Pseudotsuga menziesii*), Sitka spruce (*Picea sitchensis*) and western hemlock (*Tsuga heterophylla*) are frequently grown in forest plantations in the British Isles and often spread by seed.

- Many of our alien weeds are native to Europe. Conversely, several Oregon native species are naturalized in the British Isles, including salal (*Gaultheria shallon*), horseweed (*Conyza canadensis*) and snowberry (*Symphoricarpos albus*).



Chinquapin in Oregon

Distribution of chinquapin (*Chrysolepis chrysophylla*) in Oregon, based on records in the OSU Herbarium database and the Oregon Plant Atlas database. Squares represent variety *chrysophylla* and triangles show variety *minor*, which is found only in the southwestern corner.